

Remarks/Arguments:

Claims 1-28, 31, and 33-43 and 45-47 are pending in the application.

Claim Objections

Claims 23 and 41-43 are objected to as being in improper form due to dependency of a claim on two different claims. The claims are amended herewith as needed to overcome the objection. No new matter has been added.

Claim Rejections - 35 USC § 103

Claims 1-10, 12-15, 20-24, 27, 28, 31, 33, 34, 36, 41, 43 AND 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (US 5,114,766) in view of Lin (WO 01/92000). The rejection relies upon Jacques to provide some of the features of independent claims 1, 31, 34 and 36, but admits that Jacques does not disclose the diameter and the density of the perforations. The Office Action also does not state that Jacques teaches a WVTR of at least 60g/m²/day, and indeed Jacques does not teach this feature.

The modification of Jacques according to Lin does not arrive at the claimed invention.

Lin is relied upon to provide each of the above-recited features not taught by Jacques, i.e., the average diameter of the perforations, the degree of perforation, and the WVTR. The Examiner appears to concede that Lin does not actually teach any of these three features, either. Instead, the Examiner is of the view that the person of ordinary skill would have arrived at them by optimizing Lin's invention. The Office Action provides arguments to establish that these values can be optimized, but it provides no reason to expect that such optimization would have arrived at values of each of these variables "including those presently claimed" in the pursuit of achieving "a package [Lin's] which finely controls the final condition of that packaged therein" as alleged by the Examiner.¹ In the absence of such a reason, *prima facie* obviousness has not been demonstrated and the rejections should be withdrawn.

For purposes of a clear record, Applicants respectfully note that the second above-quoted phrase, alleged to be on page 14 of Lin at lines 22-30, is not to be found there or anywhere else in Lin. However, an accurate rendering of the passage is provided on page 13 of the Office Action.

¹ Office Action page 6 lines 10-16

In what appears to be an alternative line of reasoning based on alleged inherency, the Examiner states that "It is further noted that now with Jacques et al. as the primary reference all the materials of the various layers are taught and as such they must necessarily have the same WVTR as those instantly claimed."² Applicants respectfully disagree that one follows from the other, and point out WVTR values of almost any value, including many that are well less than the recited 60 g/m²/day, can be obtained with the same materials if they are thick enough and/or have a lower level of perforation.

There would have been no reason to apply the teachings of Lin to Jacques' invention.

Nonetheless, even if for sake of argument the recited values of these parameters could somehow be arrived at by optimizing Lin's invention, the Office Action does not offer an explanation of why one would have modified Jacques according to the teachings of Lin. In the absence of such a reason, the rejection is incomplete and does not establish *prima facie* obviousness. For this additional reason, the rejection should be withdrawn.

Modification of Jacques as proposed in the Office Action would have rendered Jacques' invention unsatisfactory for its intended purpose.

The multi-layered sheet of Jacques comprises a first and second layer. The first layer (see abstract; and column 3, lines 33-37) is "imperforate" and is relatively thin, and preferably less than 0.5 mil (which the Examiner notes corresponds to 12.7µm) and so corresponds to Applicants' "barrier layer". The first layer is also heat-sealable and faces the tray to which the sheet is sealed, which corresponds to the arrangement in Applicants' "3rd embodiment" or "Embodiment C" (see page 3, lines 17 to 20 and page 7, lines 27 to 30 of Applicants' specification). The second layer is provided with "a slit arrangement defining at least one displaceable flap" (Jacques, abstract).

The lidding film is intended to vent containers to prevent pressure build-up during heating, for instance in a microwave oven (see column 1, lines 7 to 13; column 2, lines 6 to 9 and lines 34 to 37; column 3, lines 57 to 59, column 4, lines 48 to 51, etc.) The multilayer sheet works by rupture of the thin heat-sealing layer in the region of the slits (see, for example, column 3, lines 57 to 59).

² Office Action page 13 section 51, last sentence

There are at least two aspects in which Jacques' film differs significantly from that claimed by Applicants. In view of these differences, either taken individually or together, Applicants submit that their invention is not obvious over Jacques, even in view of Lin.

(i) "Hermetically seals"

The first aspect is that Jacques' film hermetically seals the container, and this functionality is provided by the "heat-sealing or inside layer", i.e. the first layer, as is clear from lines 4 to 5 of the abstract and from column 3, lines 40 to 41. One definition of the term "hermetic" from an on-line dictionary (enclosed herewith) is "*completely sealed, especially against the escape or entry of air*".

Thus, the heat-sealing first layer of Jacques has properties exactly opposite of Applicants' unperforated barrier layer, which must be permeable to gaseous water such that the WVTR is at least 60g/m²/day" (claim 1) and preferably also permeable to oxygen (claim 2). Of course, not only oxygen but also gaseous water (as water vapor) are components of air. A layer which functions to make the container or slitted layer "*hermetically sealed*", i.e. "*completely sealed, especially against the escape or entry of air*" according to the enclosed dictionary definition, does not disclose and teaches directly against the "*breathable unperforated permeable barrier layer*" defined in Applicants' claim 1.

Given that the "hermetic seal" is clearly stated as an essential element of Jacques' invention, modification of his invention to provide a breathable film with a WVTR of at least 60 g/m²/day as recited in Applicants' independent claims would not have been obvious because it would have destroyed the very purpose of Jacques' invention. But if proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.³ Thus, there would be no motivation to modify Jacques' invention in the manner needed to arrive at the subject matter of Applicants' claims, and the rejection should be withdrawn.

With respect to dependent claims 2 and 23, the Examiner is of the view that Jacques teaches an oxygen-permeable barrier layer inherently. Applicants respectfully disagree. It should be noted that Jacques teaches a variety of polymers for use as the impermeate layer. Column 4, lines 4 to 7 and the table in columns 7 and 8 propose "a PET copolymer", while

³ *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) MPEP at 2143.01 V

column 7 lines 4 to 9 teaches that the preferred materials for the inner layer (22) in Figure 1 are selected from polyolefins and EVA. However, given that the 0.5 mil thickness⁴ is only a preference, the use of PET copolymers is not inconsistent with the requirement for a hermetic sealing layer stated elsewhere in this document. Thus, the first heat-sealing layer of Jacques can be simultaneously (i) PET-based copolyester and (ii) a hermetic sealing layer, although in that case it would probably need to be thicker than 12.7µm, but this is not ruled out by Jacques as noted above. Thus, there is no disclosure that Jacques' unperforated layer is simultaneously "*made of the same material as the instant invention and the same thickness*" and therefore there is no teaching that Jacques' imperforate layer "*must necessarily be permeable to gaseous water and oxygen*", as the Examiner argues. Indeed, the references to "hermetically sealed" containers and layers demonstrate that the exact opposite is true. Therefore, Jacques does not teach an oxygen permeable barrier layer inherently. For this additional reasons, the rejection of claims 2 and 23 should be withdrawn.

(ii) The slit arrangement

Applicants' claims recite perforations of diameter 0.05 to 1.5mm, whereas Jacques requires a "slit arrangement". Would it have been obvious to modify Jacques' slit arrangement to Applicants' perforations? Jacques' disclosure itself clearly indicates that the answer is "no". At column 4, lines 67 to 68 Jacques states "*Testing has shown that the shape of the cut is critical*" [emphasis added] to achieve the required pressure release effect. The only logical conclusion from that statement is that the cuts/slits are an absolutely essential part of Jacques' invention, and not only that, but they must be in a certain shape if the technical effect required by Jacques' invention is to be realized. Changing the slits of Jacques to perforations, as would be required to arrive at Applicants' invention, would therefore have rendered Jacques' invention unsatisfactory for its intended purpose, and therefore would not have been obvious to the person of ordinary skill.

Still further, the size of the perforations would have been far too small according to Jacques' explicit teachings. The smallest length of slit disclosed by Jacques is half an inch (12.2 mm; column 5, lines 1 to 6), and he clearly states that this is insufficient to avoid undesirable pressure build-up and that slits of $\frac{3}{4}$ or one inch are required instead. Thus, the smallest functional slit taught by Jacques has a dimension which is required to be more

⁴ Jacques column 3 lines 34 to 37

than ten times that of the largest of the perforations defined by Applicants' claim 1. Thus, replacing slits that must be $>1/2$ inch long with perforations having a diameter of only 0.05 to 1.5 mm would also have rendered Jacques' invention unsatisfactory for its intended purpose of pressure release. Accordingly, modifying Jacques to arrive at Applicants' invention would not have been obvious at the time the invention was made.

Claims 11 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (US 5,114,766) in view of Lin (WO 01/92000) and Rogers (US 4,918,156).

Claims 16, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (US 5,114,766) in view of Lin (WO 01/92000) and Dominguez De Walter et al. (US 6,787,630).

Claims 17, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (US 5,114,766) in view of Lin (WO 01/92000) and McConnell et al. (US 4,450,250).

Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (US 5,114,766) in view of Lin (WO 01/92000) and Harrington (US 4,172,824).

Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (US 5,114,766) in view of Lin (WO 01/92000) and Wang et al. (6,143,818).

Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (US 5,114,766) in view of Lin (WO 01/92000) and Zobel (US 5,832,699).

All of the above rejections rely on Jacques in view of Lin as described above, and Applicants submit that all of these rejections should be withdrawn for the reasons previously discussed.

Conclusion

Applicants submit that the rejections have been overcome, and respectfully request entry of the amendments, reconsideration and early notice of allowance. Applicants invite the Examiner to contact their undersigned representative, Frank Tise, if it appears that this may expedite examination.

Respectfully submitted,



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Attachments: Definition of "hermetic" from thefreedictionary.com

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